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FEDERAL COMMUNICATIONS COMMISSION
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Before the
FEDERAL COMMUNICATIONS COMMISSION

In the Matter of	)	
	)	
International Settlement Rates	)	CC Docket No. 96-261
	)	

DECLARATION OF PAUL W. MACAVOY

INTRODUCTION

1. My name is Paul W. MacAvoy. I hold the Williams Brothers Professorship in Management Studies at the Yale School of Management. Formerly, I was Dean of the Yale School of Management, and Dean as well as John M. Olin Professor at the University of Rochester's William E. Simon Graduate School of Business Administration. At the Massachusetts Institute of Technology in the 1970s, I was the Luce Professor of Public Policy. At Yale in the early 1980s, I was Steinbach Professor of Organization and Management and Beinecke Professor of Economics.

2. My professional interests have centered on regulation and strategic decision making by firms in the telecommunications, energy, and transportation industries. I have authored numerous journal articles and seventeen books, including most recently *The Failure of Antitrust and Regulation to Establish Competition in Long-Distance Telephone Service* (MIT Press & AEI

Press 1996). I have served on the editorial boards of several journals and was the founding editor of the *Bell Journal of Economics and Management Science*. The Supreme Court of the United States has referenced my writings on regulation in four cases, and lower federal courts have referenced them in more than twenty cases. I have testified in numerous antitrust and regulatory proceedings concerning the telecommunications industry.

3. I present my views in the public interest and file this declaration in my individual capacity, not on behalf of any interested corporation or Yale University. My research on this matter has been supported by the John M. Olin Foundation Program at Yale University on Government-Business Relations. In particular, two John Olin Fellows, graduate students in management, provided substantial assistance on early drafts.

EXECUTIVE SUMMARY

4. My declaration endorses the Commission's overriding goal of promoting reform of the international accounting rate system. To the extent that settlement rates are substantially above the long-run incremental costs of terminating calls, the current system contributes to non-competitive inefficiencies in global telecommunications markets. Reform of accounting rates alone, however, will not reduce significantly these inefficiencies and generate benefits for domestic consumers because the empirical evidence indicates that our outbound international tariff

rates are not competitive. So long as incumbent carriers are sheltered from effective competition, they cannot be expected to pass along to end users their savings from the reduced settlement rates. The FCC, therefore, should not proceed with its proposed plan for settlement rates until it has taken steps to establish, with all deliberate speed, the full-scale entry into our markets for outbound international service. There will be price reductions of genuine benefit to United States consumers only by coupling settlement-rate reductions with entry by foreign carriers that intend to compete directly with incumbent carriers.

5. This analysis of accounting rate and market access reforms rests on principles developed in my book, *The Failure of Antitrust and Regulation to Establish Competition in Long-Distance Telephone Service*. Two major points brought out in that research have not been addressed by the Commission in this proceeding. First, as my book documented, United States outbound international tariff rates have not become more competitive since AT&T lost its monopoly in the antitrust divestiture. Margins of prices over marginal costs are higher than in any domestic long-distance market; those margins have risen over time; and changes in rates for outbound international service bear the imprint of tacit collusion among the largest carriers. The *Notice* neglects to discuss such evidence, let alone solicit comment on its proper weight and relevance to the subject of this rulemaking proceeding. Second, the Commission's proposed settlement rates in the *Notice* are not grounded in the economic principles of efficient market

pricing. In some cases, the rates would result in prices above relevant marginal costs, while applications elsewhere would lead to prices below marginal costs. Those rates cause allocative inefficiency because they give purchasers of international telephone services distorted signals of the true cost of those services. Most important, given the coordinated pricing of the major United States long-distance carriers, reductions in settlement rates will not reduce prices appreciably for consumers.

6. In addition, the *Notice* proposes an unwise quid pro quo: That the United States operations of a foreign company could not provide outbound international service to an affiliated foreign market unless the foreign affiliate offered domestic United States international carriers a settlement rate consistent with the FCC's proposed benchmark. Economic and regulatory experience indicates that the FCC's proposal would be unlikely to benefit American consumers, since it is not profitable for foreign carriers to sacrifice as a result of home market entry more than they gain from becoming outbound United States carriers. A more promising initiative would be for the FCC to invite the establishment of at least one full-scale foreign carrier in each market for outbound services from major population centers. Based on projected rate reductions resulting from the entry of a carrier likely to acquire 10 to 25 percent of total traffic on those outbound routes, consumers would realize substantial savings from competitive entry—as compared with no substantial savings from the FCC's proposed changes in international settlement rates. I

therefore recommend that the Commission issue a decision on this proposed rulemaking that would defer settlement-rate reform until the foreign carrier entry program called for in the recent WTO agreement can be put in place to benefit American consumers with real rate reductions.

I. United States Outbound International Telephone Rates Are Not Competitive

7. My 1996 book analyzes price-cost margins for United States outbound international telephone rates to eight correspondent foreign countries (Canada, Mexico, United Kingdom, Germany, France, Italy, Japan, and the Dominican Republic) for the period 1991 through 1994.[1] I determined that price-cost margins were increasing despite decreasing concentration in carriers serving each country pair.[2] That inverse relationship of price-cost margins and industry concentration contradicts the competitive hypothesis that decreasing concentration results in decreasing price-cost margins. Based on that analysis, I concluded that international MTS and WATS services became *less* competitive over the first half of the 1990s. The observed relationships between margins and concentration establish the alternative hypothesis that United States outbound international telephone markets have been marked by increasingly tacitly

1. PAUL W. MACAVOY, THE FAILURE OF ANTITRUST AND REGULATION TO ESTABLISH COMPETITION IN LONG-DISTANCE TELEPHONE MARKETS 157–71 (MIT Press & AEI Press 1996). Price-cost margins are defined as [(price B marginal cost)/price]. Index prices for International Measured Telephone Service (IMTS), Discount Calling Plans, and Inbound WATS (IWATS) services were estimated from FCC tariffs for AT&T, MCI, and Sprint, and incorporated assumptions about call distribution according to applicable time-of-day discounts and destination country. *Id.* at 157–62 & app. 3. Estimates of marginal costs included components for originating access costs, network transport costs, and settlement costs (net of inbound settlement payments). *Id.* at 162–63.

2. *Id.* at 169.

collusive pricing behavior among the leading three carriers.

8. In addition, I concluded that price-cost margins pertaining to standard tariff outbound service by AT&T, MCI, and Sprint were generally high: Five out of those eight countries accounting for more than half of United States outbound traffic had margins that exceeded 70 percent.[3] Similarly, price-cost margins for discount services in outbound markets were also stable or increasing, generally paralleling those for standard services upon which their discounts had been based. Price-cost margins for outbound WATS services also increased from 1991 to 1994, despite declines in concentration of the three large outbound service providers.[4]

9. Concentration among carriers serving those correspondent markets decreased from 1991 to 1994. As measured by the Herfindahl-Hirschmann Index (HHI), in five of those country-pair markets (Germany, Japan, France, the Dominican Republic, and Italy) the HHI fell from 1.0 in 1990 to values ranging between 0.42 to 0.56 in 1994.[5] Yet price-cost margins did not decline; instead, they were constant or rising during that period. The following chart shows the resulting high margins on standard tariff calls to Japan, France, and Canada.

3. *Id.* at 164.
4. *Id.* at 165.
5. *Id.* at 166.

HHIs and Standard MTS Price-Cost Margins (1994)				
		Price-Cost Margins		
Country	HHI	AT&T	MCI	Sprint
Canada	0.42	0.80	0.74	0.71
Mexico	0.55	0.45	0.58	0.60
United Kingdom	0.50	0.80	0.84	0.84
Germany	0.56	0.70	0.72	0.75
Japan	0.43	0.87	0.82	0.84
France	0.49	0.90	0.76	0.74
Dominican Republic	0.52	0.50	0.40	0.41
Italy	0.56	0.58	0.58	0.81
Source: As indicated in MacAvoy, *supra* note 1, at 167.				

10. Further, there was no systematic relationship between lower HHIs and lower margins across country-pair markets. That is additional evidence consistent with the hypothesis that tacit price coordination restrained effective competition in the United States outbound market during the 1991–94 period.

11. Settlement rates are a significant component of the marginal costs of international telephone carriers, and in certain country-pair markets they erode the otherwise high profitability of providing outbound international service. Classical economic theory (and the FCC) suggest that reductions in settlement rates would be passed along to consumers in a competitive industry, so that price-cost margins would be the same over time. However, this hypothetical result is

contradicted by the fact that price-cost margins earned by United States international carriers from 1991 to 1994 reveal a disparity across various correspondent countries caused by variations in settlement rates. For example, price-cost margins are significantly lower for service to Mexico and the Dominican Republic than for service to France and Japan.[6] The pattern follows that of country-to-country settlement payments—those to Mexico equaled 51.3 cents per minute and those to the Dominican Republic equaled 63.0 cents per minute, both more than twice those to France and Japan at 24.0 cents and 24.9 cents, respectively. That pattern follows from the outbound carriers treating the net payments as profit taxes on margins: Price-cost margins are largely the same across countries, inclusive of settlement payment where payment rates are higher, they are absorbed in the margin to minimize the effect on the price level. It follows that, if the net payment rate were reduced—for example, by the FCC's proposal—then prices would *not* be reduced.

12. In summary, the data from those eight major countries indicate that price-cost margins on United States outbound calls were highest to foreign countries for which service provision was least concentrated, and for which concentration was declining.[7] Price-cost margins were highest for the longest-distance service. Most to the point, margins were highest for service for which the receiving country set the lowest charges for terminating calls. All these conditions refute the

6. *Id.* at 170.
7. *Id.* at 172.

assertion that prices would decrease if the FCC rulemaking forced reductions in settlement rates.

II. The Commission's Proposed Reductions in Settlement Rates Would Not Result in Final Consumer Price Reductions

13. At paragraph 91 of the *Notice*, the FCC seeks "comment on how to encourage United States carriers to reflect the reductions they receive in their settlement rates." The Commission's incomplete success in achieving pass-through of access-charge reductions domestically under price-cap regulation should make one skeptical that such a goal can be achieved by regulatory means in complex and widespread foreign markets. This is particularly unlikely in international outbound markets without any price regulation of firms in noncompetitive, well-established relationships.

14. There are two basic reasons. Analytically, the price-cost margin is equal to the concentration index, multiplied by a collusion index, both divided by the elasticity of demand.[8] None of those factors would change if there were a policy-inspired reduction in net payments rates imposed on the outbound carriers. With constant margins, prices would be reduced only if the carriers' long-run incremental costs were to decline—which would be the case only if the carriers considered net settlement payments to be part of costs for such price-setting purposes

8. That is, across all firms in the market with the same price, $(p - mc)/p = HHI(1 + v)/{-e}$, where HHI is the Herfindahl-Hirschmann Index, v the coefficient of across-carrier conjectural variation in volume of service, and e is the market elasticity of demand. *See* MACAVOY, *supra* note 1, at 99–103 and references therein.

The analysis of margins from 1991 to 1994 indicates, however, that the carriers have not operated in that way but rather have raised or reduced margins across countries in response to variations in settlement rates, so as to hold prices at roughly the same level.

15. Consider, as only an example, in the preceding table prices and margins for AT&T outbound standard tariff service from the United States to Germany, France, Italy, and the Dominican Republic. Prices ranged in 1994 from $1.078 to $1.261 per minute, with those for the first three countries clustered around $1.12 and that for the Dominican Republic as high as $1.261. Price-cost margins for the first three varied from 0.58 to 0.90, and for the last was 0.50. In effect, AT&T "absorbed" high accounting rates in reduced margins. This pattern suggests that, where margins were low and settlement rates high, FCC-reduced settlement rates would result only in increased margins.

III. Full-scale Entry of Foreign Carriers Into United States Outbound Markets Would Be More Likely to Produce Gains to Consumers Than Would the Commission's Settlement-Rate Reform Alone

16. Notwithstanding the Commission's efforts to reform international settlements policy since 1986, the results have been only incremental reductions in settlement rates, which have been largely ineffective in reducing consumer prices toward costs. The most effective way to ensure settlement-rate reform that will result in reduced international calling prices is through the

development of more competitive markets. Any new policies would have to focus on the entry of foreign carriers into outbound service markets from the United States and would have to couple that initiative to settlement-rate reform.

17. Analytically, entry results in price-cost margin reductions given that it reduces concentration. All other things being the same, and given the identity $[(p - mc)/p = HHI(1 + v)/-e]$, declines in the Herfindahl-Hirschmann Index reduce margins given that conjectural variation and elasticity remain constant. At some level of entry, tacit collusion breaks down (so that the coefficient of conjectural variation becomes negative, and $(1 + v)$ approaches zero); the result would be margins at levels consistent with widespread competition.

18. For example, consider the effects of entry on outbound service to Germany, Italy, and France. With the foreign carrier able to acquire only 20 percent of the traffic, prices should decline a with lower HHI by fifteen to twenty cents per minute. With a "breakdown" of tacit collusion among the domestic carriers, as a second result, prices should fall with reduced conjectural variation by another fifty cents per minute (as the coefficient of conjectural variation falls from 1.5 to .5). The entry in turn could cause the domestic carriers to cease "absorbing" different settlement rates; at that point, settlement-rate reform could very well bring about a further twenty-cent reduction in prices per minute.

19. The FCC's proposal to condition foreign carrier entry to provide outbound United States services on the Commission's determination that "effective competition" exists in the foreign carrier's home market would erect a reciprocity barrier to the establishment of effective competition in the United States outbound market. Such bilateral trade policy has been debunked by eminent trade theorists, such as Jagdish Bhagwati.[9] Neither classical trade theory nor strategic trade theory suggests that the FCC's reciprocity model would benefit United States consumers.[10] Instead, the FCC should unilaterally authorize, as expeditiously as possible, foreign carriers to provide United States outbound services.

CONCLUSION

20. The Commission's *Notice* blames high international rates on an easy scapegoat—the foreign monopolist of terminating access—while ignoring that American carriers are setting the much larger portion of the price of outbound United States calls in tacit collusion. To achieve the same benefit for American consumers, the Commission should adopt a policy of opening United States outbound markets to entry by foreign carriers before proceeding to require foreign companies to restructure accounting rates on terminating access services.

9. *See, e.g.*, Jagdish Bhagwati, *Free Trade: Old and New Challenges*, 104 ECON. J. 231 (1994); *see also* DOUGLAS A. IRWIN, AGAINST THE TIDE: AN INTELLECTUAL HISTORY OF FREE TRADE (Princeton University Press 1996).

10. *See* J. GREGORY SIDAK, FOREIGN INVESTMENT IN AMERICAN TELECOMMUNICATIONS 216–86 (University of Chicago Press 1997).

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 27, 1997 at New Haven, Connecticut.

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